TO THE EDITOR, *British Journal of Venereal Diseases*

Treatment of gonococcal infections in men with single dose thiamphenicol

Sir,

Thiamphenicol is widely used in Europe for the treatment of gonorrhoea, but at present it is not licensed for use in the United Kingdom or United States. The results of the treatment of a group of 70 men with uncomplicated gonococcal infections who attended this department between January and March 1983 may therefore be of interest.

Specimens for microscopy and culture for *N gonorrhoeae* were taken from the sites exposed to infection, and an endourethral swab was used to collect material for culture for *C trachomatis*. Before treatment, urine alysis, a full blood count, and syphilis serology were performed on every patient. The diagnosis of gonococcal infection was always confirmed by culture, but men showing intracellular Gram negative diplococci on microscopy of urethral or rectal specimens were treated before receipt of the culture report. Treatment with thiamphenicol capsules 0·5 g × 5 (total 2·5 g) orally was given under supervision, and patients were asked to abstain from sexual intercourse during follow up. The first re-examination was three to four days after treatment, when side effects (if any) and symptoms and signs were recorded, and microscopy, culture for *N gonorrhoeae,* and urine analysis performed. The second and final re-examination was seven to eight days after treatment, when all pretreatment investigations except syphilis serology were repeated.

The results were as follows. Seventy men were studied, who had 79 sites infected by *N gonorrhoeae*. These were: urethra alone 42; rectum alone 17; pharynx alone 3; urethra and rectum 4; urethra and pharynx 1; pharynx and rectum 2; urethra, pharynx and rectum 1. *N gonorrhoeae* was reisolated after treatment from three (6%) of 48 men with urethral infections, from four (17%) of 24 men with rectal infections, and from three (43%) of seven men with pharyngeal infections. The organisms were reisolated on the first follow up examination in six men, and on the second in four men. These 10 men all denied further sexual exposure, so the reisolation of the organisms was probably due to treatment failure rather than reinfection. Eight (11%) of the 70 men treated were infected by penicillinase producing strains of *N gonorrhoeae;* seven of these infections were cured, but gonococci were reisolated in one case.

Eight of 10 isolates of *N gonorrhoeae* from patients who had failed to respond to thiamphenicol were available for the measurement of their antibiotic sensitivity. Of these, six were inhibited by ⩽2 mg/l thiamphenicol, and all eight strains by ⩽4 mg/l; the range was 0·25-4·0 mg/l, and no strain was completely resistant.

A total of 45 men cured of gonococcal urethritis was available for assessment seven days after treatment, 11 (24%) of whom showed postgonococcal urethritis (defined as the presence of ⩾10 polymorphonuclear leucocytes per field at × 900 magnification in a Gram stained urethral smear, or at × 400 magnification in a wet mount of first catch urine). Of the 45 men, four (9%) had yielded *C trachomatis* before treatment, and this organism was reisolated in every case.

No haematological abnormalities were noted in any of the 70 men after treatment with thiamphenicol. Minor gastrointestinal side effects, usually diarrhoea on the day after treatment, were recorded in 18 (26%) of the patients treated. We conclude that in the dosage used thiamphenicol gave adequate results in the treatment of urethral infections with *N gonorrhoeae,* but in the relatively small number of patients treated for rectal and pharyngeal infections the results were unsatisfactory. In single dosage the drug appears to have no effect against *C trachomatis*. There was no evidence of toxicity or of major side effects.

Yours faithfully,
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TO THE EDITOR, *British Journal of Venereal Diseases*

Comparison of procaine penicillin, mezlocillin, and doxycycline in treatment of uncomplicated gonorrhoea

Sir,

The treatment of uncomplicated gonorrhoea in sexually transmitted disease (STD) clinics in Northern Ireland has for some years been a single intramuscular injection of procaine penicillin in a dose of 2·4 MU unaccompanied by probenecid. We have recently completed a trial of this regimen compared with mezlocillin 1 g given as a single intramuscular injection and doxycycline 300 mg single daily dose orally for three consecutive days.

The study population was made up of men and women attending the genitourinary medicine clinic of the Royal Victoria Hospital, Belfast, who were diagnosed as having uncomplicated gonococcal infection. Diagnosis of gonorrhoea was made on the finding of Gram negative intracellular diplococci in specimens taken from urethra and rectum in men and from the urethra, cervix, and rectum in women. All diagnoses were confirmed by culture. Sugar fermentation reactions and screening for β-lactamase production followed standard methods.[1 2] Minimum inhibitory concentration (MIC) determinations were carried out on New York City medium using double dilutions of the antibiotic under test. After gonorrhoea had been diagnosed patients were randomly assigned to one of the three treatment regimens. They were reviewed two days and one week after completion of treatment.

A total of 295 cases was studied, of which 42 (14·2%) did not return for follow up. Of the 250 patients who attended for follow up, 76 were women and 174 men. The penicillin treatment group comprised 79 patients, who were all microscopically and culture negative at follow up. Mezlocillin treatment was used in 81 patients, of whom three were culture positive on first follow up and three were positive on second review. All those positive on second review had had sexual intercourse with an untreated (probably primary) contact between first and second review. All three of these female contacts subsequently proved to have gonorrhoea. We assume therefore the true failure rate was three of 81 (3·7%.). The doxycycline treatment group comprised 90 patients, six of whom were culture positive at first review and denied further sexual intercourse. One further patient relapsed at second review and he admitted to having had sexual intercourse with a prostitute who subsequently proved to have gonorrhoea. This gave a true failure rate of 7·4%. Neumann *et al*[3] reported a 2·2% failure rate with the same regimen.

Table I shows treatment results broken down by sex and number of reviews attended. Isolates from four patients were β-lactamase producing. Two of these patients had received doxycycline and were culture negative on three follow up visits.